

AMENDMENTS TO THE CLAIMS

What is claimed is:

1 1. (Original) A cellular data packet, comprising:
2 a preamble for collision determination and synchronization;
3 a start-of-frame delimiter (SFD);
4 a destination address (DA);
5 a source address (SA);
6 a routing information block (RIB); and
7 an informational field.

1 2. (Original) The cellular data packet of claim 1, wherein said informational field
2 comprises:

3 a type field for indicating whether said packet is a control packet or a service
4 packet;
5 a status field;
6 a data field; and
7 a cyclic redundancy check (CRC) field, including error detection and
8 correction information.

1 3. (Original) The cellular data packet of claim 2, wherein said type field comprises:
2 a two-byte protocol identifier;
3 a two-byte sub-protocol identifier; and
4 a two-byte service identifier.

1 4. (Original) The cellular data packet of claim 2, wherein said status field is
2 configured to indicate whether said packet is an ACK or a NACK packet, the number of data
3 packets pending, spread spectrum synchronization information, or whether said packet is
4 native or routed.

1 5. (Original) The cellular data packet of claim 1, wherein said destination address
2 comprises:

3 a region indicator for indicating a region location of a recipient user station;
4 a cell identifier for indicating a cell within said region; and
5 a cellular IP address of said recipient user station within said cell.

1 6. (Original) The cellular data packet of claim 1, wherein said source address
2 comprises:

3 a region indicator for indicating a region location of a transmitting user
4 station;
5 a cell identifier for indicating a cell within said region; and
6 a cellular IP address of said transmitting user station within said cell.

1 7. (Original) The cellular data packet of claim 1, wherein said routing information
2 block indicates a routing path of said packet from said transmitting/receiving user station to
3 said base station.

1 8. (Original) The cellular data packet of claim 7, wherein said routing information
2 block is configured to indicate up to ten routing links between said transmitting station and
3 said base station.

1 9. (Original) The cellular data packet of claim 1, wherein said packet is a variable-
2 length data packet.

1 10. (Original) The cellular data packet of claim 9, wherein said packet has a
2 maximum byte-length of 512 bytes.

1 11. (Original) A method for routing a data packet within an intelligent cellular IP
2 network, wherein a transmitting/receiving station is outside of an originating transmitting or
3 destination receiving cell or blocked from said originating transmitting or destination
4 receiving cell, comprising the steps of:

5 transmitting a data packet, including routing information indicating at least
6 one intermediate recipient other than a base station;

7 receiving of said packet by said at least one intermediate recipient ; and

8 transmitting said packet in accordance with said routing information from
9 said at least one intermediate recipient to said receiving base station;

10 wherein said at least one intermediate recipient is a different
11 transmitting/receiving station within said cell.

1 12. (Original) The method of claim 11, wherein said routing information is
2 determined from a routing table specific to each of said transmitting/receiving stations.

1 13. (Original) The method of claim 12, wherein said routing table can be static or
2 dynamic.

1 14-15. (withdrawn)

1 16. (Original) An cellular modem, comprising:

2 a radio frequency unit for transmitting/receiving data packets; and

3 a baseband-to-intermediate frequency conversion unit, having a cellular
4 network routing engine based on cellular IP, configured to covert the baseband information
5 from a computer into intermediate frequency information for processing by said radio
6 frequency unit; wherein said modem is configured to serve as a router within said cellular
7 network.

1 17. (Original) The cellular modem of claim 16, wherein said radio frequency unit is
2 configured to operate in the MMDS, LMDS, [ISM, ITFS] and MDS spectrums.